

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant(s):	Florence		
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Examiner:	Jeanty, Romain		
Title:	METHOD AND SYSTEM OF DELIVERING ITEMS USING OVERLAPPING DELIVERY WINDOWS		

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APPEAL BRIEF UNDER 37 CFR § 41.37

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed July 14, 2006.

1. ***Real Party in Interest.***

The real party in interest in this appeal is UNITED PARCEL SERVICE OF AMERICA, INC., a Georgia corporation having a principal place of business at 55 Glenlake Parkway, Atlanta, Georgia 30328, the assignee of the above-referenced patent application.

2. ***Related Appeals and Interferences.***

There are no related appeals and/or interferences involving this application or its subject matter.

3. ***Status of Claims.***

Claims 1, 3-9 and 11-16 and 18-40 are pending, with Claims 2, 10 and 17 having been canceled. Claims 3, 5-8, 12-15, 18-19, 22, 23, 25-28 and 31-39 have been withdrawn from consideration. The remaining claims, namely Claims 1, 4, 9, 11, 16, 20-21, 24, 29-30 and 40, stand rejected and are the subject of the present appeal.

4. ***Status of Amendments.***

It was unclear from the record whether the amendments made in response to the Final Office Action were entered. In Section 7 of the Advisory Action mailed June 30, 2006, neither box "a)," which indicates that the proposed amendments will not be entered for purposes of appeal, nor box "b)," which indicates that the proposed amendments will be entered for purposes of appeal, were checked. The Advisory Action indicated only that Claims 1, 4, 9, 11, 16, 20-21, 24, 29-30 and 40 stand rejected and that the request for reconsideration was considered but did not place the application in condition for allowance.

In a call with the Examiner on September 12, 2006, the Examiner stated that the claim amendments should have been entered. He further agreed to prepare a corrected Advisory Action indicating as such. As a result, Applicant's understanding is that all of the amendments made to the claims in response to the Final Office Action have been entered.

5. ***Summary of Claimed Subject Matter.***

The present patent application is directed toward a method of obtaining desired delivery times from an intended recipient of an item, wherein overlapping time windows are used. (Pat. Appl., pg. 3, lns. 6-7). As disclosed and claimed, the method involves providing each recipient with a plurality of time windows, which overlap with one another in time and from which the recipient may select a time for delivery of the item. (*Id.* at pg. 3, lns. 8-10). In particular, the plurality of time windows offered includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows. (*Id.* at pg. 3, lns. 11-13). For example, each window may be two hours in length, and the overlapping time window may overlap each of the sequential time windows by an hour. (*Id.* at pg. 3, lns. 14-

16). Alternatively, each window may be an hour in length, with the overlapping time window overlapping each of the sequential time windows by one-half hour. (*Id.* at pg. 3, lns. 16-19). Once the intended recipient has selected a delivery time from the plurality offered, the item can be delivered within the selected time window. (*See* Claim 16).

The method and system of one embodiment may further involve applying predetermined parameters to the plurality of time windows, prior to providing them to the intended recipient, in order to identify a subset of the plurality that can or should be offered. (*Id.* at pg. 3, lns. 21-23). These parameters may include, for example, which time windows have associated with them the least cost of service in making the delivery, whether the cost of delivering the item within a time window is less than a monetary threshold, and whether a maximum number of orders to be delivered within one time window has been reached. (*Id.* at pg. 3, lns. 23-17).

The present application is further directed toward a method of implementing an on-line program for delivering items. (*See* Claim 24). As disclosed and claimed, the method may involve displaying an Internet webpage that is accessible to a user for on-line interactive communication between the user and the Internet webpage. (*Id.*). The user may then be offered a plurality of available time windows for delivery, wherein the plurality includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows. (*Id.*). As above, once the user has selected a delivery time from the plurality of time windows offered, the item may then be delivered. (*Id.*). In one exemplary embodiment, in order to deliver the item, a routing engine may be used to determine the optimum delivery route. (*See* Claim 30).

6. *Grounds of Rejection to be Reviewed on Appeal.*

The Final Office Action dated March 15, 2006 and the Advisory Action dated June 30, 2006, continue to reject Claims 1, 4, 9, 11, 16, 20-21, 24, 29-30 and 40 under 35 U.S.C. 103(a). In particular, as noted on Page 11 of Applicant's Amendment dated December 16, 2005 ("the December 16th Amendment"), Claims 1, 4, 9, 11, 16, 24, 29 and 40 were rejected as unpatentable over U.S. Patent No. 6,085,170 to Tsukuda ("*Tsukuda*") in view of an article in Traffic World Magazine entitled "Core Competency" written by David Biederman ("*David*"). In addition, as

noted on Page 18 of the December 16th Amendment, Claims 20, 21 and 30 were rejected as unpatentable over *Tsukuda* in view of *David* and further in view of U.S. Patent No. 6,879,962 to Smith et al. ("*Smith et al.*").

7. ***Argument.***

As explained below, Applicant respectfully asserts that none of the references cited, whether viewed alone or in combination, teach or suggest each recitation of the pending claims. In particular, none of the references teach or suggest offering a plurality of time windows, or a subset of the plurality, to a recipient as available times for delivery of an item, wherein the plurality, or subset, includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows.

A. Use of Overlapping Time Windows Provides Novel Solution to Known Problem

As noted on Page 13 of the December 16th Amendment, citing Page 10, lines 9-16 of the Specification, use of overlapping time windows, as opposed to simply using sequential time windows, has been shown to significantly increase the number of times a driver stops in a given hour to deliver items (i.e., the number of Stops Per On Road Hour (SPOR)). This, in turn, decreases the number of drivers required to achieve the same number of deliveries in a given amount of time.

As further noted in the Interview Summary included on Page 11 of Applicant's Amendment dated June 14, 2006 ("the June 14th Amendment"), use of overlapping time windows, among other things, provides a customer with more choices, while not limiting the amount of time within which the driver can deliver the package. To illustrate, suppose that a customer (i.e., the recipient of a package) is offered a choice between having an item delivered between 9:00 AM and 11:00 AM and between 11:00 AM and 1:00 PM (i.e., two sequential time windows). If the customer is not available until 10:00 AM, he or she will be forced to select the 11:00 AM to 1:00 PM time slot, even though he or she is available and could have received the package earlier. One obvious option for alleviating this problem would be to simply shorten the time periods offered. For example, the customer may be offered time slots 9-10:00 AM, 10-

11:00 AM, 11:00 AM – 12:00 PM, and 12-1:00 PM. However, shortening the time period within which a driver may deliver a package may cause problems for the driver and the delivery company. It limits their flexibility in selecting the most efficient route between stops and may even force the driver to go back to different areas multiple times within a given day just to make sure he or she delivers the packages within the confined window of time.

A non-obvious solution for alleviating the problem is to offer overlapping time windows – i.e., at least two sequential time windows (e.g., 9:00 AM – 11:00 AM and 11:00 AM – 1:00 PM) and at least one overlapping time window that overlaps a portion of each of the sequential time windows (e.g., 10:00 AM – 12:00 PM). The advantage of this method, which is claimed in Applicant's pending claims, is that it allows the customer to have more choices, yet does not limit the amount of time within which the driver can deliver the package. Continuing the above example, the customer is able to select the 10:00 AM – 12:00 PM time slot, thus not having to wait until possibly 1:00 PM before the package is delivered, yet the driver is provided a longer amount of time within which to work.

As noted on Page 12 of the June 14th Amendment, in response to the above description of the advantages that can be gained by practicing the claimed method, the Examiner stated that these advantages were not described in the claim. However, it is Applicant's contention that the advantages gleaned from the use of a claimed method need not be specifically detailed in the claim itself and, instead, necessarily follow from performing the novel steps of the claimed method.

B. References, Alone or Combined, Do Not Teach or Suggest Each Recitation of the Pending Claims

i. *Tsukuda Fails to Teach or Suggest Overlapping Time Windows*

As noted on Page 13 of the December 16th Amendment, *Tsukuda* discloses a “delivery managing system for managing delivery of goods from a distribution center through an agent to a receiver.” (*Tsukuda*, Abstract). *Tsukuda* does not provide any other description of the delivery time other than stating that it is a “date and time” for delivery. *Tsukuda* does not disclose

delivery times of any particular duration or relation (i.e., how the delivery times relate to one another). *Tsukuda* does not disclose the use of a time window that includes a portion of two or more sequential time windows.

ii. *David Fails to Teach or Suggest Overlapping Time Windows*

David similarly does not disclose the use of a time window including a portion of two or more sequential time windows. In fact, as noted on Page 14 of the December 16th Amendment, *David* specifically recognizes, but does not solve, a problem that is addressed by the present invention. In general, *David* discusses online retailers that desire to keep fulfillment operations in-house and, therefore, are scrambling to expand their own facilities (i.e., distribution and warehousing capabilities) to avoid e-commerce backlogs. With respect to Peapod, Inc., the article discusses “routing challenges” posed by the online grocery environment “that are different than the logistics [John Caltagirone, Peapod’s logistics and operations chief] is used to.” Specifically, the article states:

For example, customers select delivery times within two-hour windows. The challenge is getting enough density on each route and time slot. ‘If we are in the neighborhood at 7 a.m., we don’t want to come back at 3 p.m. for someone else.’ [Caltagirone] said. ‘The marketing challenge is to entice others to that window. It is different than routing where you have set times from store to store.’ (*David*, pg. 2).

While *David* does disclose enabling the customers to “select delivery times within two-hour windows,” *David* does not teach or suggest providing each customer with a plurality of time windows including at least two sequential time windows and an overlapping time window that overlaps a portion of each of the sequential time windows. Instead, *David* outlines a recognized problem in the art of “getting enough density on each route and time slot” and of enticing customers to particular time windows, yet does not provide a solution to this problem. The present invention provides this solution through the use of time windows that include a portion of two or more offered sequential time windows.

iii. Smith Fails to Teach or Suggest Overlapping Time Windows

While not relied upon by the Examiner for so teaching, Applicant respectfully asserts that *Smith et al.* further does not teach or suggest use of overlapping time windows for delivery of an item. Applicant further submits, as noted on Page 18 of the December 16th Amendment, that *Smith et al.* does not teach or suggest the elements for which it is cited. In particular, Applicant respectfully submits that, with respect to Claim 20, *Smith et al.* does not teach or suggest “determining which time windows have associated with them the least cost of service in making the delivery.” In addition, with respect to Claim 21, *Smith et al.* further does not teach or suggest “determining whether the cost of delivering the item within a time window in the plurality is less than a monetary threshold.”

Smith et al. discloses a logistics method “that provides computer programming for controlling a plurality of transports to supply a plurality of delivery locations from one or more bases.” (*Smith et al.*, Abstract). According to *Smith et al.*, “[g]iven information about each transport such as load capacity, fuel level, location intelligence, and the like ... and information about the materials, manifest status, and other factors, potential least cost delivery routes using capable transports can be automatically produced for selection by the operator.” (*Id.*). *Smith et al.* does not teach or suggest delivery time windows offered to recipients for delivery of an item, let alone determining which time windows to offer based on either the least cost of delivering the item or a cost less than a monetary threshold.

iv. Tsukuda, David, and Smith et al. Combined, Fail to Teach or Suggest Overlapping Time Windows

As discussed above, none of the references alone teach or suggest the use of overlapping time windows for delivery of an item. As a result, a combination of the references could not teach or suggest the use of time windows that include a portion of two or more sequential time windows. Furthermore, there is no suggestion in any of the references of Applicant’s solution to providing customers with more delivery options without limiting the amount of time within which the driver can deliver a package.

8. ***Claims Appendix.***

1. (Previously Presented) A method of obtaining desired delivery times from intended recipients of items, comprising:

providing each recipient with a plurality of time windows from which the recipient may choose a time for delivery of an item, wherein said plurality includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows; and

receiving choices made by recipients from the plurality of time windows.

2. (Canceled)

3. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 2, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential two hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one hour.

4. (Previously Presented) A method of obtaining desired delivery times as defined in Claim 1, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential one hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one-half hour.

5. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 1, wherein said providing step includes applying predetermined parameters to said plurality of time windows to determine which time windows of said plurality to offer to the recipients as available times from which the recipient may choose a time for delivery of an item.

6. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 5, wherein said providing step includes determining which time windows of said plurality have associated with them the least cost of service in making the delivery.

7. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 5, wherein said providing step includes determining whether the cost of delivering the item within a time window of said plurality is less than a monetary threshold.

8. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 5, wherein said providing step includes determining whether a maximum number of orders to be delivered within one of said plurality of time windows has been reached.

9. (Previously Presented) A method of obtaining desired delivery times from intended recipients of items, comprising:

identifying a plurality of time windows;

applying predetermined parameters to said plurality of time windows to identify a subset of time windows of said plurality to offer to recipients as available times for delivery, wherein the subset of time windows includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows;

providing each recipient with said subset of time windows from which the recipient may choose a time for delivery of an item; and

receiving choices made by recipients from said subset of said plurality of time windows.

10. (Canceled)

11. (Previously Presented) A method of obtaining desired delivery times as defined in Claim 9, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential two hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one hour.

12. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 10, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential one hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one half-hour.

13. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 9, wherein said applying step includes determining which time windows of said plurality have associated with them the least cost of service in making the delivery.

14. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 9, wherein said step of applying step includes determining whether the cost of delivering the item within a time window of said plurality is less than a monetary threshold.

15. (Withdrawn) A method of obtaining desired delivery times as defined in Claim 9, wherein said applying step includes determining whether a maximum number of orders to be delivered within one of said plurality of time windows has been reached.

16. (Previously Presented) A method of delivering items, comprising:
offering delivery items for sale to recipients;
identifying a plurality of time windows;
applying predetermined parameters to the plurality of time windows to identify a subset of time windows of the plurality to offer to recipients as available times for delivery, wherein the subset of time windows includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows;
providing each recipient with the subset of time windows from which the recipient may choose a time for delivery of an item;
receiving choices made by recipients from said subset of said plurality of time windows;
and
delivering the items chosen by the recipient to a destination.

17. (Canceled)

18. (Withdrawn) A method of delivering items as defined in Claim 16, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential two hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one hour.

19. (Withdrawn) A method of delivering items as defined in Claim 16, wherein said providing step includes providing each recipient with a plurality of time windows that include at least two sequential one hour time windows and at least one overlapping time window that overlaps each of the sequential time windows by one-half hour.

20. (Original) A method of delivering items as defined in Claim 16, wherein said applying step includes determining which time windows of said plurality have associated with them the least cost of service in making the delivery.

21. (Original) A method of delivering items as defined in Claim 20, wherein said applying step includes determining whether the cost of delivering the item within a time window of said plurality is less than a monetary threshold.

22. (Withdrawn) A method of delivering items as defined in Claim 20, wherein said applying step includes determining whether a maximum number of orders to be delivered within one of said plurality of time windows has been reached.

23. (Withdrawn) A method of obtaining desired delivery times from intended recipients of items, comprising:

creating a plurality of time windows that include at least two sequential time windows and at least one overlapping time window that overlaps each of said sequential time windows;

applying predetermined parameters to the plurality of time windows to identify a subset of time windows of said plurality to offer to recipients as available times for delivery;

providing each recipient with the subset of time windows from which the recipient may choose a time for delivery of an item; and

receiving choices made by recipients from the subset of said plurality of overlapping time windows.

24. (Previously Presented) A method for implementing an on-line program for delivering items, comprising:

displaying an Internet webpage accessible to at least one user for on-line interactive communications between the user and the Internet webpage;

offering the user a plurality of available time windows for delivery, wherein the plurality includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows;

receiving delivery time window selections made by the user; and

delivering items to a destination.

25. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said offering step includes utilizing a scheduling engine to determine which time windows of the plurality are available as delivery times to the user.

26. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said offering step includes utilizing a scheduling engine to apply predetermined parameters to the plurality of time windows to identify a subset of time windows of the plurality to offer to the user as available times for delivery.

27. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said offering step includes utilizing a scheduling engine to determine which time windows of said plurality have associated with them the least cost of service in making the delivery.

28. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said offering step includes utilizing a scheduling engine to determine whether the cost of delivering the item within a time window of the plurality is less than a monetary threshold.

29. (Original) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said offering step includes utilizing a scheduling engine to determine whether a maximum number of orders to be delivered within one of said plurality of time windows has been reached.

30. (Original) A method for implementing an on-line program for delivering items as defined in Claim 24, wherein said delivering step includes utilizing a routing engine to determine the optimum delivery route for delivering the item to the user.

31. (Withdrawn) A system for implementing an on-line program for delivering items, comprising:

an Internet webpage accessible to at least one user for on-line interactive communications between the user and the Internet webpage;

software for offering at least one item for sale to at least one user via the Internet webpage and for receiving delivery requests from the user;

a first memory area for storing a plurality of time windows that overlap with one another in time from which the user may choose a time for delivery of an item;

a scheduling engine for determining available delivery time windows from the plurality of time windows stored in the first memory area and offering the available delivery time windows to the user; and

a second memory area for receiving and storing delivery time window choices made by the user.

32. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 31, wherein the scheduling engine is programmed to apply predetermined parameters to the plurality of time windows to identify a subset of time windows of the plurality to offer to the user as available times for delivery.

33. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 31, wherein the scheduling engine is programmed to determine which time windows of said plurality have associated with them the least cost of service in making the delivery.

34. (Withdrawn) A method for implementing an on-line program for delivering items as defined in Claim 31, wherein the scheduling engine is programmed whether the cost of delivering the item within a time window of the plurality is less than a monetary threshold.

35. (Withdrawn) A system for implementing an on-line program for delivering items as defined in Claim 31, further comprising a routing engine programmed to determine the optimum delivery route for delivering the item to the user.

36. (Withdrawn) A computer-readable medium comprising computer-executable instructions for performing the steps of:

offering at least one item for sale to at least one user via an Internet webpage;
displaying a plurality of time windows that overlap with one another in time from which the user may choose a time for delivery of an item; and
receiving delivery time window choices made by the user.

37. (Withdrawn) The computer-readable medium of Claim 36, wherein said computer-readable medium further comprises computer-executable instructions for determining available delivery time windows from the plurality of time windows and offering the available delivery time windows to the user.

38. (Withdrawn) The computer-readable medium of Claim 36, wherein said computer-readable medium further comprises computer-executable instructions for applying predetermined parameters to the plurality of time windows to identify a subset of time windows of the plurality to offer to the user as available times for delivery.

39. (Withdrawn) The computer-readable medium of Claim 36, wherein said computer-readable medium further comprises computer-executable instructions for determining the optimum delivery route for delivering the item to the user.

40. (Previously Presented) A method of displaying delivery time windows to a recipient, said method comprising the steps of:

identifying a plurality of time windows in which a delivery may be made to a recipient;

applying predetermined parameters to the plurality of time windows to identify a subset of time windows of the plurality to offer to the recipient as available times for delivery, wherein the subset of time windows includes at least two sequential time windows and at least one overlapping time window that overlaps a portion of each of the sequential time windows; and responsive to predetermined parameters, indicating that a subset of time windows of the plurality is available for delivery.

9. ***Evidence Appendix.***

None.


10. ***Related Proceedings Appendix.***

None.

CONCLUSION

For at least the foregoing reasons, Applicant respectfully requests that the rejections be reversed.

Respectfully submitted,


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